GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

LOK SABHA
UNSTARRED QUESTION No. 3215
(TO BE ANSWERED ON 14.03.2018)

PRODUCING LIQUID HYDROCARBON OIL FROM PLASTIC WASTE

3215. SHRI GAJANAN KIRTIKAR:
SHRI A. ANWHAR RAAJHAA:
SHRI BIDYUT BARAN MAHATO:
SHRI SUDHEER GUPTA:
SHRI T. RADHAKRISHNAN:
SHRI ASHOK SHANKARRAO CHAVAN:
SHRI NARANBHAI KACHHADIYA:
KUNWAR HARIBANSH SINGH:
SHRI S.R. VIJAYAKUMAR:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether certain countries are producing liquid hydrocarbon oil from plastic waste and if so, the details thereof;
(b) whether any research has been undertaken by his Ministry in this regard and if so, the details thereof;
(c) whether a facile technology for converting plastic waste to petroleum products has been developed by CSIR which is under advance stage of implementation;
(d) if so, the details of the projects and the reasons for delay in implementation along with the time by which it is likely to be implemented;
(e) whether the Indian Railways has shown interest in converting their in-house generated waste plastic to diesel to run their locomotives; and
(f) if so, the details thereof and the time by which it is likely to be finalised?

ANSWER

MINISTER OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES

(DR. HARSH VARDHAN)

(a) It appears from information available on internet that plants are installed in some countries which claim to produce liquid hydrocarbon oil from plastic wastes, viz., Cynar Plc (UK & Ireland), Agilyx (USA), Polymer Energy LLC (USA), Plastic2Oil (USA), Blest (Japan), etc.

(b) CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun along with GAIL (India) Ltd is working on a project to convert waste plastics to liquid fuel (gasoline/diesel).

CSIR-Indian Institute of Chemical Technology (CSIR-IICT) has developed a solid catalyst to convert waste plastics in to fuel oil.

(c) Yes, CSIR-IIP along with GAIL (India) Ltd. has developed a process for converting waste plastics (polyethylene and polypropylene) into any one of the products, viz. Gasoline, diesel or aromatics. The process after being developed at the lab scale has been validated at the bench scale and 1 Ton per day (TPD) pilot/demo unit is being set up at CSIR-IIP.

Solid catalyst developed by CSIR-IICT is ready for implementation in collaboration with industry.

(d) The 1 TPD demo plant is likely to be commissioned by CSIR-IIP in September-October 2018. After commissioning, experiments would be carried out for revalidation, fine tuning of process parameters. The process is likely to be ready for implementation for commercial application by mid-2019.

(e) A discussion was held between CSIR-IIP and Indian Railways on 9th April 2015 for adoption of this technology by Indian Railways. Indian Railways had shown interest to adopt this technology for converting their in-house waste plastics into diesel.

(f) Indian Railways would be approached for adoption once this technology is ready for commercial application.

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